## CONTENTS – 1968, Nos. 1-4

Abramoff, Peter (see Darnell, Rezneat M.)	
Alexander, Charles E. and Walter G. Whitford Energy requirements of Uta stansburiana	678
AMIN, OMAR M.  Deformed individuals of two species of suckers, Catostomus insignis and C. clarkii, from the Gila River system, Arizona	
ATKINS, LEONARD (See GORMAN, GEORGE C.)	
AWBREY, FRANK T. Call discrimination in female Scaphiopus couchii and Scaphiopus hurterii	420
BACHMANN, KONRAD (See GOIN, OLIVE B.)	
BACON, JAMES P., JR. (See INGER, ROBERT F.)	
BANNER, ARNOLD Attraction of young lemon sharks, Negaprion brevirostris, by sound	871
BARNETT, MICHAEL A. AND ROBERT H. GIBBS, JR.  Validity of the stomiatoid fish species Bathophilus flemingi and B. indicus	197
BARNETT, MICHAEL A. AND ROBERT H. GIBBS, JR.  Four new stomiatoid fishes of the genus <i>Bathophilus</i> with a revised key to the species of <i>Bathophilus</i>	826
BARTLETT, MARTIN R. AND RICHARD L. HAEDRICH Neuston nets and South Atlantic larval blue marlin (Makaira nigricans)	469
BARWICK, RICHARD E. (See STEBBINS, ROBERT C.)	
BASKETT, THOMAS S. (See SCHROEDER, EUGENE E.)	
BASS, A. J. (See HUGHES, G. R.)	
Bigelow, Henry B. and William C. Schroeder  New records of two geographically restricted species of western Atlantic skates: Breviraja yucatanensis and Dactylobalus armatus	630
BOËTIUS, JAN (See GORDON, MALCOLM S.)	
BOGART, JAMES P. (See WASSERMAN, AARON O.)	
BOSARGE, O. STUART (See FERGUSON, DENZEL E.)	
Branson, Branley A. Notropis venustus: another introduced species in the overburdened Nevada fish fauna	870
BRODIE, EDMUND D., JR. Investigations on the skin toxin of the adult rough-skinned newt, Taricha granulosa	307
Brown, C. J. D. (See Gould, William R.)	
Brown, Charles W.  Additional observations on the function of the nasolabial grooves of plethodontid salamanders	. 728
BULLIS, HARVEY R. (See ESCHMEYER, WILLIAM N.)	
Burghardt, Gordon M.  Chemical preference studies on newborn snakes of three sympatric species of Natrix	732
BURNS, THOMAS A. (See HADLEY, NEIL F.)	
Bustard, H. Robert The egg-shell of gekkonid lizards: a taxonomic adjunct	. 162

Bustard, H. Robert Temperature dependent activity in the Australian gecko Diplodactylus vittatus	606
CARLTON, WILLIAM G. AND WILLIAM B. JACKSON The eye lens as an age indicator in carp	633
	000
CHAN, W. L.  Opistognathus hongkongiensis, a replacement name for the jawfish Opisthognathus fasciatus Chan	
CHANG, RANDOLPH K. C. AND JOHN J. MAGNUSON A radiographic method for determining gas bladder volume of fish	187
CHEN, T. R. AND A. W. EBELING Karyological evidence of female heterogamety in the mosquitofish, Gambusia affinis	70
COHEN, DANIEL M.  The cyclopterid genus <i>Paraliparis</i> , a senior synonym of <i>Gymnolycodes</i> and <i>Eutelichthys</i> , with the description of a new species from the Gulf of Mexico	
Cole, Charles J., Charles H. Lowe and John W. Wright Karyotypes of eight species of toads (genus <i>Bufo</i> ) in North America	96
COLLETTE, BRUCE B. Strongylura timucu (Walbaum): a valid species of Western Atlantic needlefish	189
COOPER, EDWIN L. AND FRANCISCO GARCIA HERRERA Chronic skin allograft rejection in the apodan Typhlonectes compressicauda	224
Crane, Jules M., Jr. Bioluminescence in the batfish Dibranchus atlanticus	410
CUELLAR, HECTOR S. (See NELSON, CRAIG E.)	
DALQUEST, WALTER W. Lungfishes from the Permian of Texas	194
Darnell, Rezneat M. and Peter Abramoff Distribution of the gynogenetic fish, <i>Poecilia formosa</i> , with remarks on the evolution of the species	
Dawson, C. E. Eastern Pacific wormfishes, Microdesmus dipus Günther and Microdesmus dorsipunctatus sp. nov.	
DELMONTE, PETER J., IRA RUBINOFF, AND ROBERTA RUBINOFF	
Laboratory rearing through metamorphosis of some Panamanian gobies	411
DOOLEY, JAMES K. Young filefishes, Cantherhines macrocerus and C. pullus	863
EBELING, A. W. (See CHEN, T. R.)	
EBERHARDT, L. L. An approximation to a multiple-comparison test	314
ECHELLE, ANTHONY A. (See MAY, EDWIN B.)	
EDSALL, THOMAS A. AND MARGARET I. SAXON Two hermaphroditic alewives from Lake Michigan	406
EMERY, ALAN R. A new species of Chromis (Pisces: Pomacentridae) from the western North Atlantic	49
EMERY, ALAN R. Underwater telescope	627
EMLEN, STEPHEN T.	
Territoriality in the bullfrog, Rana catesbeiana	240

Es

E'

F

F

F

ł

ESCHMEYER, WILLIAM N. AND HARVEY R. BULLIS Four advanced larval specimens of the blue marlin, Makaira nigricans, from the western Atlantic Ocean	414
EVANS, DAVID H. (See GORDON, MALCOLM S.)	
EVANS, ROBERT R.  Absence of myoglobin in the sonic muscles of two species of searobins, <i>Prionotus</i> (Triglidae)	869
FERGUSON, DENZEL E., JAMES P. MCKEOWN, O. STUART BOSARGE, AND HOBART F. LANDRETH Sun-compass orientation of bullfrogs	230
FISHELSON, LEV Structure of the vertebral column in Lepadichthys lineatus, a clingfish associated with crinoids	
FITCH, JOHN E. (See GOTSHALL, DANIEL W.)	
FOLLETT, W. I. Radiography of freeze-dried fishes	867
FOUQUETTE, M. J., JR. Observations on the natural history of microteiid lizards from the Venezuelan Andes	881
Fox, Richard C. Studies of Late Cretaceous vertebrates I. The braincase of Champsosaurus Cope (Reptilia: Eosuchia)	
FRASER, THOMAS H. Comparative osteology of the Atlantic snooks (Pisces, Centropomus)	433
FUJINO, KAZUO AND TAGAY KANG Serum esterase groups of Pacific and Atlantic tunas	56
GARCEA, ROBERT AND GEORGE GORMAN A difference in male territorial display behavior in two sibling species of Anolis	419
GEBHARDT, BRYAN M. (See VOLPE, E. PETER)	
GIBBONS, J. WHITFIELD Population structure and survivorship in the painted turtle, Chrysemys picta	260
GIBBS, ROBERT H., JR. (See BARNETT, MICHAEL A.)	
GOIN, COLEMAN J. (See GOIN, OLIVE B.)	
Goin, Coleman J. and Olive B. Goin A new green tree frog from Suriname	581
GOIN, OLIVE B. (See GOIN, COLEMAN J.)	
Goin, Olive B., Coleman J. Goin, and Konrad Bachmann DNA and amphibian life history	532
GORDON, MALCOLM S., JAN BOËTIUS, DAVID H. EVANS, AND LARRY C. OGLESBY Additional observations on the natural history of the mudskipper, <i>Periophthalmus sobrinus</i>	853
GORDON, ROBERT E. Terrestrial activity of the spotted salamander, Ambystoma maculatum	879
GORMAN, GEORGE (See GARCEA, ROBERT)	
GORMAN, GEORGE C. AND LEONARD ATKINS  Confirmation of an X-Y sex determining mechanism in lizards (Anolis)	. 159
GORMAN, JOE Breeding of an Andean toad in hot springs	. 167
GOTSHALL, DANIEL W. AND JOHN E. FITCH	
The louvar, Luvarus imperialis, in the eastern Pacific, with notes on its life history	181

.... 633

us .... 198

... 187

s, ... 384

... 96

... 189

.. 224

.. 410

.. 194

f .. 354

s . 512

411

863

314

406

49

627

240

Fishes of the genus Semotilus (Cyprinidae) from Montana	628
Greer, Allen E.  The predominance of oviparity as a mode of reproduction in scincid lizards	171
Greer, Allen E. Clutch size in the scincid genus <i>Emoia</i>	417
HADLEY, NEIL F. AND THOMAS A. BURNS Intraspecific comparison of the blood properties of the side-blotched lizard, <i>Uta stans-buriana</i>	
HAEDRICH, RICHARD L.  The stromateoid fish Psenopsis obscura from off Mozambique	873
HAEDRICH, RICHARD L. (See BARTLETT, MARTIN R.)	
HEATWOLE, AUDRY (See HEATWOLE, HAROLD)	
HEATWOLE, HAROLD Relationship of escape behavior and camouflage in anoline lizards	109
HEATWOLE, HAROLD AND AUDRY HEATWOLE Motivational aspects of feeding behavior in toads	692
HERALD, EARL S. Size and aggressiveness of the sevengill shark (Notorynchus maculatus)	412
HERRERA, FRANCISCO GARCIA (See COOPER, EDWIN L.)	
HEYER, W. RONALD The proper name for the type-species of the genus Leptodactylus	160
HOBSON, EDMUND S. AND VLADIMIR WALTERS First eastern Pacific record of Canthigaster amboinensis, an Indo-West Pacific pufferfish	861
HOESE, DOUGLASS F. (See ROSENBLATT, RICHARD H.)	
HOLMAN, J. ALAN Upper Pliocene snakes from Idaho	152
HOMAN, WILLIAM P. Osmotic regulation in Rana pipiens	876
HORN, K. F. (See Smith, G. R.)	
HOWELL, JOHN H. (See SMITH, ALLEN J.)	
Hubbs, Carl L. (See Ishiyama, Reizo)	
Hubbs, Carl L. and Reizo Ishiyama Methods for the taxonomic study and description of skates (Rajidae)	483
Hughes, G. R., A. J. Bass, and M. T. Mentis New African record for Ridley turtle (Lepidochelys olivacea)	423
HULET, WILLIAM H. AND GEORGE MUSIL Intracellular bacteria in the light organ of the deep sea angler fish, Melanocetus murrayi	506
HUTCHISON, VICTOR H. (See KOSH, RICHARD J.)	
INGER, ROBERT F. AND JAMES P. BACON, JR. Annual reproduction and clutch size in rain forest frogs from Sarawak	602
ISHIYAMA, REIZO (See HUBBS, CARL L.)	
ISHIYAMA, REIZO AND CARL L. HUBBS  Bathyraja, a genus of Pacific skates (Rajidae) regarded as phyletically distinct from the Atlantic genus Breviraja	

JA JA K

K

ŀ

I

I

1

JACKSON, WILLIAM B. (See CARLTON, WILLIAM G.)	
JAMESON, DAVID L. (See MAXSON, LINDA R.)	
JAMESON, D. L. (See LYERLA, T. A.)	
Kang, Tagay (See Fujino, Kazuo)	
Kato, Susumu  Triakis acutipinna (Galeoidea, Triakidae), a new species of shark from Ecuador	319
KENDALL, J. I. (See Muir, B. S.)	
Kerfoot, W. Charles Geographic variability of the lizard, Sceloporus graciosus Baird and Girard, in the eastern part of its range	
KOSH, RICHARD J. AND VICTOR H. HUTCHISON Daily rhythmicity of temperature tolerance in eastern painted turtles, Chrysemys picta	244
LAGIOS, MICHAEL D. The pituitary gland of the paddlefish, Polyodon spathula	401
LAHIRI, S. B. Histological re-examination of the barbels of a catfish, Wallago attu	185
LANDRETH, HOBART F. (See FERGUSON, DENZEL E.)	
LARSON, DOUGLAS W.  The occurrence of neotenic salamanders, Ambystoma tigrinum diaboli Dunn, in Devils  Lake, North Dakota	
LEE, ANTHONY K. Water economy of the burrowing frog, Heleioporus eyrei (Gray)	741
LICHT, LAWRENCE E. AND BOBBI LOW Cardiac response of snakes after ingestion of toad parotoid venom	547
LOW, BOBBI (See LICHT, LAWRENCE E.)	
LOWE, CHARLES H. (See WRIGHT, JOHN W.)	
Lowe, Charles H. (See Cole, Charles J.)	
Lyerla, T. A. and D. L. Jameson Development of color in chimeras of Pacific tree frogs	113
Lyman, Charles P.  Body temperature of exhausted salmon	631
Lynch, John D.  The status of the nominal genera <i>Basanitia</i> and <i>Phrynanodus</i> from Brazil (Amphibia: Leptodactylidae)	
MACKAY, R. STUART Observations on peristaltic activity versus temperature and circadian rhythms in undisturbed Varanus flavescens and Ctenosaura pectinata	252
MACLEAN, WILLIAM P, A case of intersexuality in Bothrops moojeni Hoge	. 170
Magnuson, John J. (See Chang, Randolph K. C.)	
MAXSON, LINDA R. AND DAVID L. JAMESON A comparison of the chromosomes of Hyla regilla and Hyla californiae	704
MAY, EDWIN B. AND ANTHONY A. ECHELLE Young-of-year alligator gar in Lake Texoma, Oklahoma	629
MAYS, CHARLES E. AND MAX A. NICKERSON Notes on shedding in the sea snake, Laticauda semifasciata (Reinwardt) in captivity	619

.... 171

.... 417

ıs---- 737

.... 873

.... 109

... 692

... 412

... 160

... 861

... 152

... 876

... 483

... 423

yi 506

... 602

ie ... 407

McCoy, Clarence J. A review of the genus Laemanctus (Reptilia, Iguanidae)	665
McDowall, R. M.  The application of the terms anadromous and catadromous to the southern hemisphere salmonoid fishes	
McKeown, James P. (See Ferguson, Denzel E.)	
Meldrim, John W. and Gerald W. Wadley Holotypes of fishes described by A.W.C.T. Herre transferred to the U.S. National Museum from the University of Washington	872
MENTIS, M. T. (See HUGHES, G. R.)	
MERTENS, ROBERT Remarks on the scientific name of the African puff adder	621
Meszler, Richard M. and Douglas B. Webster Histochemistry of the rattlesnake facial pit	722
MEYER, JOHN R.  Distribution and variation of the Mexican lizard, <i>Anolis barkeri</i> Schmidt (Iguanidae), with redescription of the species	
MILLER, ROBERT VICTOR A systematic study of the greenside darter, Etheostoma blennioides Rafinesque (Pisces: Percidae)	
MOE, MARTIN A. Jr.  A reversed, partially ambicolorate tonguesole, Symphurus diomedianus, from the Gulf of Mexico	
MUR, B. S. AND J. I. KENDALL Structural modifications in the gills of tunas and some other oceanic fishes	. 388
Musil, George (See Hulet, William H.)	
NAKAMURA, EUGENE L. Visual acuity of two tunas, Katsuwonus pelamis and Euthynnus affinis	. 41
Nelson, Craig E. and Hector S. Cuellar Anatomical comparison of tadpoles of the genera <i>Hypopachus</i> and <i>Gastrophryne</i> (Microhylidae)	. 423
NELSON, JOSEPH S.  Deep-water ninespine sticklebacks, <i>Pungitius pungitius</i> , in the Mississippi drainage Crooked Lake, Indiana	326
NICKERSON, MAX A. (See MAYS, CHARLES E.)	
OGLESBY, LARRY C. (See GORDON, MALCOLM S.)	
Organ, Della J. (See Organ, James A.)	
Organ, James A.  Courtship behavior and spermatophore of the cave salamander, Eurycea lucifuge (Rafinesque)	
Organ, James A. and Della J. Organ Courtship behavior of the red salamander, Pseudotriton ruber	. 217
PATTEN, BENJAMIN G. Abnormal freshwater fishes in Washington streams	. 399
PIAVIS, GEORGE W. (see SMITH, ALLEN J.)	
POUGH, F. HARVEY AND MARGARET B. POUGH The systematic status of painted turtles (Chrysemys) in the northeastern United States	612
POUGH, MARGARET B. (See POUGH, F. HARVEY)	

F

I

1

Rand, A. Stanley A nesting aggregation of iguanas	552
Reed, Roger J.  Mark and recapture studies of eight species of darters (Pisces: Percidae) in three streams of northwestern Pennsylvania	
REISMAN, HOWARD M.  Effects of social stimuli on the secondary sex characters of male three-spined sticklebacks,  Gasterosteus aculeatus	816
RELYEA, KENNETH (See YERGER, RALPH W.)	
ROHR, BENNIE A.  The searsiid fish, <i>Platytroctes apus</i> , from the western tropical Atlantic and Gulf of Mexico	624
ROSENBLATT, RICHARD H. AND DOUGLASS F. HOESE Sexual dimorphism in the dentition of <i>Pseudupeneus</i> , and its bearing on the generic classification of the Mullidae	
Rubinoff, Ira (See Delmonte, Peter J.)	
Ruibal, Rodolfo The ultrastructure of the surface of lizard scales	698
SALE, PETER F.  Influence of cover availability on depth preference of the juvenile manini, Acanthurus triostegus sandvicensis	
SALOMAN, CARL H. (See TAYLOR, JOHN L.)	
SANDERGOCK, F. KEITH AND NORMAN J. WILIMOVSKY Revision of the cottid genus Enophrys	832
SAUNDERS, DOROTHY CHAPMAN Differential blood cell counts of 50 species of fishes from the Red Sea	491
SAVAGE, JAY M.  The dendrobatid frogs of Central America	745
SAVAGE, JAY M.  The distribution and synonymy of the neotropical frog, Eleutherodactylus moro	878
SAXON, MARGARET I. (See EDSALL, THOMAS A.)	
SCHMIDT, ROBERT S. Chuckle calls of the leopard frog (Rana pipiens)	56
Schroeder, Eugene E. and Thomas S. Baskett Age estimation, growth rates, and population structure in Missouri bullfrogs	58
SCHROEDER, WILLIAM C. (See BIGELOW, HENRY B.)	
SHONTZ, NANCY NICKERSON Electrophoretic patterns of proteins of salamanders of the genus Desmognathus (family Plethodontidae)	
SILL, WILLIAM D.  The zoogeography of the Crocodilia	. 7
SLASTENENKO, E. P. The identification of <i>Blennius tentacularis</i> var. <i>rhodensis</i> Kähsbauer from Rhodes Island, Mediterranean Sea	85
SLAUGHTER, BOB H. AND STEWART SPRINGER Replacement of rostral teeth in sawfishes and sawsharks	. 49
SMITH, ALLEN J., JOHN H. HOWELL, AND GEORGE W. PIAVIS Comparative embryology of five species of lampreys of the Upper Great Lakes	. 46

ere ..... 176

ım .... 872

.... 621

.... 722

e), ..... 89

es: ---- 1

of .... 172

.... 388

.... 41

ro-.... 423

ge, .... 326

ga .... 576

.... 217

.... 612

SMITH, G. R., W. L. STOKES, AND K. F. HORN Some late Pleistocene fishes of Lake Bonneville	807
SMITH, J. L. B. A new labrid fish from deep water of Mozambique	343
SMITH, ROY E. Studies on reproduction in Costa Rican Ameiva festiva and Ameiva quadrilineate (Sauria: Teiidae)	
SMITH, W. G. A neonate Atlantic loggerhead turtle, Caretta caretta caretta captured at sea	. 880
SNELSON, FRANKLIN F., JR. Systematics of the cyprinid fish Notropis amoenus, with comments on the subgenus. Notropis	
SOULÉ, MICHAEL Body temperatures of quiescent Sator grandaevus in nature	. 622
Springer, Stewart (See Slaughter, Bob H.)	
STEBBINS, ROBERT C. AND RICHARD E. BARWICK Radiotelemetric study of thermoregulation in a lace monitor	_ 541
STOKES, W. L. (See SMITH, G. R.)	
SWIFT, CAMM Pleistocene freshwater fishes from Ingleside Pit, San Patricio County, Texas	_ 63
TAYLOR, JOHN L. AND CARL H. SALOMAN  The oarfish, Regalecus glesne: a new occurrence and previous records from the Gulf o  Mexico	
THOMAS, RICHARD The Typhlops biminiensis group of Antillean blind snakes	713
THORSON, THOMAS B. Body fluid partitioning in Reptilia	592
TILLEY, STEPHEN G. AND DONALD W. TINKLE  A reinterpretation of the reproductive cycle and demography of the salamander Desmognathus ochrophaeus	- 299
TINKLE, DONALD W. (See TILLEY, STEPHEN G.)	
Todd, Eric S. Terrestrial sojourns of the long-jaw mudsucker, Gillichthys mirabilis	192
TRUEB, LINDA Variation in the tree frog Hyla lancasteri	285
Tsai, Chu-Fa Distribution of the harlequin darter, Etheostoma histrio	178
Tsai, Chu-Fa Variation and distribution of the rock darter, Etheostoma rupestre	346
VOLPE, E. PETER AND BRYAN M. GEBHARDT Somatic chromosomes of the marine toad, Bufo marinus (Linné)	
WADLEY, GERALD W. (See MELDRIM, JOHN W.)	
WALKER, R. B. The amphibians of Zaria, in the northern Guinea Savannah, Nigeria	164
WALTERS, VLADIMIR (See HOBSON, EDMUND S.)	
WARD, JOSEPH P.	
Presumed hybridization of two species of box turtles	874

y z

F

WASSERMAN, AARON O. AND JAMES P. BOGART Chromosomes of two species of spadefoot toads (Genus Scaphiopus) and their hybrid	303
Webster, Douglas B. (See Meszler, Richard M.)	
WEINTRAUB, JOEL D. Winter behavior of the granite spiny lizard, Sceloporus orcutti Stejneger	708
WEISEL, GEORGE F. The salmonoid adipose fin	620
WHITFORD, WALTER G. Physiological responses to temperature and desiccation in the endemic New Mexico plethodontids, Plethodon neomexicanus and Aneides hardii	
WHITFORD, WALTER G. (See ALEXANDER, CHARLES E.)	
WILIMOVSKY, NORMAN J. (see SANDERCOCK, F. KEITH)	
WILLIAMS, JAMES D. A new species of sculpin, Cottus pygmaeus, from a spring in the Alabama River Basin	33
Wright, John W. (See Cole, Charles J.)	
WRIGHT, JOHN W. AND CHARLES H. LOWE Weeds, polyploids, parthenogenesis, and the geographical and ecological distribution of all-female species of <i>Cnemidophorus</i>	12
WRIGHT, THOMAS D.  Changes in abundance of yellow bass (Morone mississippiensis) and white bass (Methysops) in Madison, Wisconsin, lakes	. 18
YERGER, RALPH W. AND KENNETH RELYEA  The flat-headed bullheads (Pisces: Ictaluridae) of the southeastern United States, and a new species of Ictalurus from the Gulf Coast	
YOSHIDA, HOWARD O. Pectoral fin length of juvenile albacore	. 62
ZORACH, TIMOTHY  Etheostoma bellum, a new darter of the subgenus Nothonotus from the Green River system  Kentucky and Tennessee	. 47
ZWEIFEL, RICHARD G.  Effects of temperature, body size, and hybridization on mating calls of toads, Bufo a. americanus and Bufo woodhousii fowleri	. 26
Reviews and Comments	, 88
EDITORIAL NOTES AND NEWS	, 89
SUMMARY OF THE MEETINGS	. 89
INDEX	. 90

..... 343

uta ..... 236

..... 880

us --- 776

.... 622

.... 541

.... 63

of .... 404

.... 713

.... 592

g-.... 299

.... 192

... 285

... 178

... 346

\_\_ 570

... 164

... 874